What is claimed is:

1. A piezoelectric device comprising a monolithic multilayer form with a stack of at least two ceramic layers and an electrode layer set in between said two ceramic layers wherein said electrode layer contains copper.

2. The device according to claim 1, wherein said multilayer form is produced from ceramic green foils which contain a thermohydrolithically degradable binder.

3. The device according to claim 2, wherein said binder is a polyurethane dispersion.

4. The device according to one of the claim 1, wherein the density of said ceramic layers is at least 96% of said ceramic layers theoretically obtainable density.

5. The device according to one of the claim 2, wherein the density of said ceramic layers shows at least 96% of said theoretically obtainable density.

6. The device according to claim 1, wherein said ceramic layers contain grains having a grain size in a range between and including 0,8 and 5 μm.

7. The device according to claim 2, wherein said ceramic layers contain grains having a grain size in a range between and including 0,8 and 5 μm.

8. The device according to claim 4, wherein said ceramic layers contain grains having a grain size in a range between and including 0,8 and 5 μm.

9. The device according to claim 1, wherein said device includes at least 10 stacked electrode layers.

10. The device according to claim 2, wherein said device includes at least 10 stacked electrode layers.

11. The device according to claim 4, wherein said device includes at least 10 stacked electrode layers.

12. The device according to claim 6, wherein said device includes at least 10 stacked electrode layers.

13. The device according to claim 1, wherein said ceramic layers contain a ferroelectrical Perovskite-ceramic having a general composition ABO_3.

14. The device according to claim 2, wherein said ceramic layers contain a ferroelectrical Perovskite-ceramic having a general composition ABO_3.

15. The device according to claim 4, wherein said ceramic layers contain a ferroelectrical Perovskite-ceramic having a general composition ABO_3.

16. The device according to claim 6, wherein said ceramic layers contain a ferroelectrical Perovskite-ceramic having a general composition ABO_3.

17. The device according to claim 9, wherein said ceramic layers contain a ferroelectrical Perovskite-ceramic having a general composition ABO_3.

18. The device according to claim 13, wherein said Perovskite-ceramic is of a PZT type $Pb(Zr_xTi_{1-x})O_3$.

19. The device according to claim 13, wherein cations are built on A-positions of the ceramic and where cations on B-positions are replaced by apt other cations or combinations of cations.

20. The device according to claim 18, wherein cations are built on A-positions of the ceramic and where cations on B-positions are replaced by apt other cations or combinations of cations.

21. The device according to claim 19, wherein bivalent metal cations M^{II} are built in on A-positions of the ceramic.

22. The device according to claim 21, wherein said bivalent metal cations M^{II} are selected from a group comprising barium, strontium, calcium and copper.

23. The device according to claim 21, wherein partially trivalent metal cations M^{III} are built on A-positions of said ceramic, said metal cations M^{III} selected from a group comprising scandium, yttrium, bismuth and lanthanum.

24. The device according to claim 21, wherein partially trivalent metal cations M^{III} are built on said A-positions of the ceramic, said metal cations M^{III} being selected from a group comprising lanthanides.

25. The device according to claim 21, wherein monovalent cations are integrated on A-positions of said ceramic.

26. The device according to claim 25, wherein said monovalent cations are selected from a group comprising silver, copper, sodium and potassium.

27. The device according to claim 21, wherein combinations of bivalent metal cations M^{II} and monovalent cations are integrated on A-positions of said ceramic.

28. The device according to claim 25, wherein combinations of bivalent metal cations M^{II} and monovalent cations are integrated on A-positions of said ceramic.

29. The device according to claim 17, wherein for partial substitution of quadrivalent cations Zr and Ti on B-positions of said Perovskite ceramic, combinations of at least two of mono- and quinvalent metal cations MI1/4MV3/4 with MI = Na, K and MV = Nb, Ta are used.

30. The device according to claim 17, wherein for partial substitution of quadrivalent cations Zr and Ti on B-positions of said Perovskite ceramic, at least one of bi- and quintvalent metal cations MII1/3MV2/3 with MII = Mg, Zn, Ni, Co and MV = Nb, Ta are used.

31. The device according to claim 17, wherein for partial substitution of quadrivalent cations Zr and Ti on B-positions of said ferroelectrical Perovskite ceramic, at least one of tri- and quintvalent metal cations MIII1/2MV2/3 with MIII = Fe, In, Sc, heavier lanthanide elements and MV = Nb, Ta are used.

32. The device according to claim 17, wherein for partial substitution of quadrivalent cations Zr and Ti on B-positions of said ferroelectrical Perovskite ceramic, combinations of at least two of MIII2/3MVI1/3 with MIII = Fe, In, Sc, heavier lanthanide elements and MVI = W are used.

33. The device according to claim 17, wherein for partial substitution of quadrivalent cations Zr and Ti on the B-positions of ferroelectrical Perovskite ceramic, combinations of MII1/2MVI1/2 with MII = Mg, Co, Ni and MVI = W are used.

34. The device according to claim 20, said ceramic comprises Pb1-x-ySExCuyV''' X/2(Zr0,54-zTi0,46+z)O3 wherein 0,01 < x < 0,05, -0,15 < z , +0,15, 0 < y < 0,06, SE is a rare earth metal, V is a vacancy and a PbO surplus from 1 to maximally 5 molar-% is employed.

35. The device according to claim 20, wherein said ceramic includes an additive of CuO.

36. A method for producing a piezoelectric device, comprising the steps of:
- producting a stack of ceramic green foil comprising binder and electrode layers formed by stacking and laminating green foils; and
- debindering said stack of ceramic green foils in an atmosphere comprising an inert

gas and oxygen, whereby the oxygen content is reduced by adding an apt amount of hydrogen such that said electrode layers are not damaged.

37. The method according to claim 36, wherein said step of debindering is carried out at a temperature in a range between and including 150 to 600°C.

38. The method according to claim 36, wherein said atmosphere includes hydrogen with a partial pressure of upto and including 200 mbar.

39. The method according to claim 37, wherein said atmosphere includes hydrogen with a partial pressure of upto and including 200 mbar.

40. The method according to claim 36 further comprising the step of sintering said stack at a temperature which is below melting point of copper, said sintering occuring in an atmosphere comprising nitrogen, hydrogen and steam, and wherein oxygen partial pressure is set by an apt hydrogen concentration such that equilibrate partial pressure of equilibrium Cu/Cu_2O is not exceeded.

41. The method according to claim 37 further comprising the step of sintering said stack at a temperature which is below melting point of copper, said sintering occuring in an atmosphere comprising nitrogen, hydrogen and steam, and wherein oxygen partial pressure is set by an apt hydrogen concentration such that equilibrate partial pressure of equilibrium Cu/Cu_2O is not exceeded.

42. The method according to claim 38 further comprising the step of sintering said stack at a temperature which is below melting point of copper, said sintering occuring in an atmosphere comprising nitrogen, hydrogen and steam, and wherein oxygen partial pressure is set by an apt hydrogen concentration such that equilibrate partial pressure of equilibrium Cu/Cu_2O is not exceeded.

43. Method according to claim 37, wherein said temperature is maintained for a duration of 2 to 12 hours.

44. A method for producing a piezoelectric device, comprising the steps of: first producting a stack of a ceramic green foil comprising binder and electrode layers by stacking and laminating green foils; second debindering said stack in an atmosphere comprising an inert gas and oxygen, whereby oxygen content is reduced by adding an apt amount of hydrogen such that said electrode layers are not damaged; and sintering said stack at a temperature which is below melting point of copper, said sintering occuring in an atmosphere comprising nitrogen, hydrogen and steam, and wherein oxygen partial pressure is set by an apt hydrogen concentration such that equilibrate partial pressure of equilibrium Cu/Cu_2O is not exceeded.